

In the claims:

Please amend the claims as follows:

1. (Currently Amended) A biopsy instrument ~~needle~~ for sampling bone marrow tissue, ~~comprising said instrument comprising:~~
a handle (2); and
tissue sampling means (3) ~~comprising a sampling tube with a bore (1) therein to receive a tissue sample, a handle for inserting said instrument into said tissue; and~~
a single hollow tube, configured for both cutting and receiving a tissue sample, coupled to said handle;
said tube having (a) a bore defining a tissue-receiving space for said tissue sample, (b) a substantially rigid tip, and
the outer surface of the sampling tube having (c) an outer wall configured to contact said tissue, said outer wall being provided with an abrading formation(11) extending in an axial direction along the tube said tube to abrade said tissue;
characterized in that the abrading formation comprises a slot (11) cut into the wall of the sampling tube with at least one sharpened edge where the slot meets the outer wall of the sampling tube to abrade the sampled tissue, to permit the tip of the sampling tube to and thereby allow said tip of said single hollow tube to be laterally displaced within said bone marrow tissue whilst the tube is inserted into the bone marrow tissue to facilitate retrieval of the tissue sample.
2. (Currently Amended) A biopsy needle as claimed in claim 1, wherein ~~both outer edges of the slot are sharpened~~ said abrading formation comprises at least one slot cut into said outer wall, said slot having at least one sharp edge.
3. (Currently Amended) A biopsy needle as claimed in claim 1 ~~wherein the slot extends through the wall of the sampling tube 2, wherein two outer edges of said slot are defined by the intersection of said slot with said outer wall, and wherein both said outer edges are sharp.~~

a /
4. (Currently Amended) A biopsy needle as claimed in claim 1 ~~wherein the abrading formation comprises a plurality of slots spaced circumferentially on the sample tube 2, wherein said slot extends through said sampling tube between said outer wall and said bore.~~

5. (Currently Amended) A biopsy needle as claimed in claim 4, 2, wherein ~~the slots of the said abrading formation do not extend to the end of the sampling tube tip~~ comprises a plurality of said slots spaced circumferentially about said tube.

6. (Currently Amended) A biopsy needle as claimed in claim 1 ~~wherein a slot extends in an axial direction for at least 1 cm from the sampling 5, wherein said slots of said abrading formation do not extend to the end of said tube tip.~~

7. (Currently Amended) A biopsy needle as claimed in claim 1 ~~wherein the tissue sampling means further comprise a sample detacher (12) at the tip of the sampling tube to assist in detaching the base of the sample from adjoining tissue 2, wherein said slot extends, in an axial direction, at least 1 cm from said tip.~~

8. (Currently Amended) A biopsy needle as claimed in claim 7 1, wherein ~~the said tube further comprises a sample detacher~~ comprises a slot (12) cut into the at said tip of said sampling tube tip wall to assist in detaching a base portion of said tissue sample from adjoining tissue.

9. (Currently Amended) A biopsy needle as claimed in claim 8, wherein ~~the said sample detacher slot (12) extends through the sampling~~ comprises a slot cut into a wall of said tube tip wall.

10. (Currently Amended) A biopsy needle as claimed in claim 8 ~~wherein the sample detacher comprises a plurality of sample detacher slots (12) spaced circumferentially spaced on the sample tube tip 9, wherein said sample detacher slot extends through said wall of said tip.~~

a/ 11. (Currently Amended) A biopsy needle as claimed in claim 8 9, wherein ~~the or~~
each said sample detacher slot (12) has a length of between 1mm and 2mm comprises a plurality
of sample detacher slots spaced circumferentially spaced on said tip.

12. (Currently Amended) A biopsy needle as claimed in claim 7 ~~wherein at least part~~
~~of the 9, wherein said sample detacher is disposed on the sampling tube substantially opposite at~~
least a part of the abrading formation slot has a length of between 1mm and 2mm.

13. (Currently Amended) A biopsy needle as claimed in claim 1 ~~further comprising~~
~~stop means (9) to inhibit over insertion of the sampling tube into the tissue being sampled 8,~~
wherein at least a part of said sample detacher is disposed on said tube substantially opposite at
least a part of said abrading formation.

14. (Currently Amended) A biopsy needle as claimed in claim 13 ~~wherein at least a~~
~~portion of the stop means is integrally formed with at least a portion of the handle~~
1 further comprising a stop to inhibit over-insertion of said tube into said tissue being sampled.

15. (Currently Amended) A biopsy needle as claimed in claim 1 ~~wherein the~~
~~sampling tube bore extends through the 14, wherein at least a portion of said stop is integrally~~
formed with at least a portion of said handle.

16. (Currently Amended) A biopsy needle as claimed in claim 15 ~~wherein the handle~~
~~is adapted for connection of suction means to the sampling tube bore 1, wherein said tube bore~~
extends through said handle.

17. (Currently Amended) A biopsy needle as claimed in claim 15 ~~further comprising~~
~~coupling means (17) for coupling the needle to a motor drive (27) for rotation of the sampling~~
tube 16, wherein said handle is adapted for connection of a suction device to said tube bore.

Al 18. (Currently Amended) A biopsy needle as claimed in claim 17 ~~wherein the coupling means is separable from the needle and comprises a shaft adapted to be received by the sampling tube, a connecting portion (20) for connecting the motor drive portion (19) to engage with the handle 16 further comprising a coupling for coupling the needle to a motor drive for rotation of said tube.~~

19. (Currently Amended) A biopsy needle as claimed in claim 1 wherein the sampling tube has a sharpened, beveled tip ~~(10).~~

20. (Cancelled)

Al 21. (Currently Amended) A method of sampling a substance using a needle, ~~the said~~ needle having a handle (2) ~~and coupled to a sampling means (3) member, said sampling member~~ comprising a sampling tip with a bore (4) therein to receive a sample of ~~the said~~ substance, ~~the said~~ sampling tip having a formation (11) on its outer surface for abrading ~~the said~~ substance, the method comprising:

inserting ~~the said~~ sampling tip into ~~the said~~ substance to be sampled to collect a sample within its ~~said~~ bore;

~~moving the gyrating said~~ sampling tip such that ~~the said~~ substance is abraded to allow ~~the said~~ sampling tip to be displaced laterally sufficiently to weaken ~~the a~~ connection between ~~the said~~ sample and the bulk of the substance; and

withdrawing ~~the said~~ sampling tip with ~~the said~~ sample therein.

22. (Currently Amended) A biopsy needle for sampling bone marrow tissue, comprising:

a tissue sampling means (3) member comprising a sampling tube with a bore (4) therein to receive a tissue sample;

a handle (2) connected to ~~the said~~ tissue sampling ~~means member~~ for manual insertion of the biopsy needle; and

~~coupling means (17) a coupling member, detachably connected to the said tissue sampling means member, for coupling the needle to a rotary motor drive (27);~~
whereby the needle is adapted for both manual insertion and motor-assisted insertion.

23. (Currently Amended) A biopsy needle as claimed in claim 22 wherein an outer surface of the said sampling tube is in contact with the said sampled tissue and wherein the said motor drive rotates at least said outer surface.

24. (Currently Amended) A biopsy needle as claimed in claim 22 further comprising ~~stop means (9)~~ a stop, said stop comprising an enlargement of said sampling tube to inhibit over- insertion of the sampling tube into the said sampled tissue.

25. (Currently Amended) A biopsy needle as claimed in claim 24, wherein ~~at least a portion of the stop means is integrally formed with at least a portion of the handle~~ said enlargement is disposed at a fixed distance from a tip of said sampling tube.

26. (Currently Amended) A biopsy needle as claimed in claim 22 ~~wherein the coupling means is separable from the needle and comprises a shaft adapted to be received by the sampling tube, a connection portion (20) for connecting the motor drive and a drive portion (19) to engage with the~~ 24, wherein at least a portion of said stop is integrally formed with at least a portion of said handle.

27. (Currently Amended) A biopsy needle as claimed in claim 22 ~~further comprising a motor drive (27) and an insulating, sterile or sterilizable, protective sheath (28) to substantially enclose the motor drive except for a drive shaft, and to allow operation of the motor drive whilst within the sheath~~ wherein said coupling member is separable from the needle and comprises a shaft adapted to be received by said sampling tube, a connecting portion for connecting said motor drive, and a drive portion to engage with said handle.

28. (Cancelled)

29. (Currently Amended) A biopsy needle assembly comprising:

~~an~~ a single elongated tubular cannula, having an axially extending lumen there through and having distal and proximal ends,

a cannula handle attached to the proximal end of said cannula, said cannula handle extending transversely to the axis of said cannula and having a cavity aligned with and open to the proximal end of said cannula,

a distal end of said cannula which is bevelled and sharpened and in free fluid communication with the proximal end,

a recess or recesses on the outer surface of the said cannula distal end,

an expansion on the outer surface of the said cannula distal end,

an orifice in said cannula handle in fluid flow communication with said cannula lumen, said orifice being coaxial with said cannula lumen,

a stylet having a knob affixed to its proximal end, said knob sized to fit matingly within said orifice,

an elongated stylet shaft extending from said knob, slidably received within said cannula lumen,

said stylet having a sharpened distal tip which extends distally from the distal end of said cannula,

said orifice retaining said knob so that force may be rotatably applied around either axis of direction of said elongated stylet positioned in said orifice without relative rotation between elongated stylet and said elongated cannula,

a connector attachment having a knob affixed to its proximal end, said knob being sized to fit matingly within said orifice,

said connector attachment having a shaft affixed to its proximal end, said knob and shaft being sized to fit within said orifice of cannula handle distally and said knob sized to fit an electric drill or electric screw driver proximally,

said orifice retaining said knob of said connector attachment so that force may be rotatably applied around either axis direction of said elongated connector attachment positioned in said orifice without relative rotation between elongated connector attachment and said elongated cannula,

ai
an electric drill or electric screw driver,
a sheath which is sized to fit around said electric drill or electric screw driver,
said sheath having an opening to receive said electric drill or said electric screw driver,
said opening having a strap or string to enclose said electric drill or said electric screw
driver,
a pushrod having a knob affixed to its proximal end, said knob being sized to fit slidably
within said orifice,
an elongated shaft extending from said pushrod knob, slidably received within said
cannula lumen,
said pushrod having a blunt distal tip which extends distally from the distal end of said
cannula.

aj
30. (New) A biopsy needle as claimed in claim 22 further comprising a motor drive
and an insulating, sterile or sterilizable, protective sheath to substantially enclose said motor
drive except for a drive shaft, whereby said motor drive may be operated to drive said tissue
sampling member while said motor drive is within said sheath.

31. (New) A biopsy needle as claimed in claim 18, wherein said coupling is
separable from the needle and comprises a shaft adapted to be received by said tube, a
connecting portion for connecting the motor drive, and a drive portion to engage with said handle